

ABSTRACT

A spread-spectrum-matched-filter apparatus including a code generator, an in-phase-symbol-matched filter, a quadrature-phase-symbol-matched filter, an in-phase-frame-matched filter, a quadrature-phase-frame-matched filter, and a controller. The code generator generates replicas of a chip-sequence signal, which are used to set the symbol-impulse responses of the in-phase-symbol-matched filter and the quadrature-phase-symbol-matched filter. The in-phase-frame-matched filter and the quadrature-phase-frame-matched filter detect a despread-header-symbol-sequence signal and generate a maximum output signal which may be used as a data-start signal or for synchronizing the timing of the controller as to when to trigger sampling of the A/D converter, the output of the symbol-matched filters, detection of the data-symbol-sequence signal and other time-dependent processes.

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